

BASIC PRINCIPLES OF RENEWAL OF SPORTSMEN WITH MYOFASCIAL BY A PAIN SYNDROME TAKING INTO ACCOUNT THE PSYCHOLOGICAL ASPECT OF THEIR REHABILITATION

Kharchenko G.D.

National University of Physical Education and Sport of Ukraine

Annotation. Purpose: to examine and learn the fundamentals of the recovery of athletes with myofascial pain syndrome, taking into account the psychological aspect of their rehabilitation. Material: the data analyzed and summarized the scientific and methodological literature; sites on the internet. Results: the analysis of specialized literature on development features myofascial pain syndrome in athletes. Myofascial pain syndrome is widespread in sports practice. It is characterized by muscle spasms and trigger points, palpation of which there is a growing pain. The basic principles of the recovery of athletes with myofascial pain syndrome. The questions of the effectiveness of rehabilitation measures, taking into account the influence of psychological factors on the recovery of athletes. Conclusions: the presented strategy is comprehensive physical rehabilitation. Recommended keeping the basic principles of the recovery of athletes and the psychological aspect of their rehabilitation.

Keywords: athletes, myofascial, muscular, physical, rehabilitation.

Introduction

Theoretical analysis of scientific-methodic literature showed that for achieving of results in sportsmen's with myofascial syndrome sport workability rehabilitation, there are required quite new approaches to means and methods of physical rehabilitation, which would meet individual features of sportsmen, facilitate maximally effective realization of their interests, bents and abilities [4, 5, 6]. In this connection, at present time, one of the most important tasks of traumatology is creation of treatment-prevention measures' system, which would facilitate revelation of unfavorable after effects of physical loads on supporting motor system at early stages, timely stimulation of regenerative and compensating potentials of sportsman's organism and his return to full fledged training and competition functioning. [2, 4, 8]. Injures or diseases of sportsmen's supporting motor system is accompanied by sudden and sharp stoppage of training functioning, cause disordering of motion stereotype that results in painful reaction of whole organism [2, 3, 5]. Sudden stoppage of sport's practicing facilitates destruction of conditioned reflexive links, which were developed during many years' trainings [3, 4, 9]. Functional condition of all organs and systems of organism worsens, reduction of physical potentials happen, psychological problems appear. Negative emotions, connected with feelings (of trauma's after effects), alarm of losing sport form depress sportsman that still more accelerate the process of de-training [1, 7, 8]. Pain syndrome can be conditioned either by acute trauma or durable regular micro-traumas of back and lumbar soft tissues. Pain is a limiting factor in sportsmen's functioning [2, 9, 10].

Myofascial pain syndrome (MFPS) is a myosalgia, which is characterized by local and reflected pain. Specific feature of this pathology is presence of changes in soft, mainly in muscle and ligament, structures, in the so-called myofascial trigger points (MFTP) [1, 9, 10]. Just owing to this fact rehabilitation of sportsmen with MFPS is so urgent.

In physical rehabilitation they mark out the following types of rehabilitation [3,5, 6]:

- current – in the process of training;
- urgent – after training;
- postponed –in several hours or days after training.

Dynamic of rehabilitation processes develops in sequence: first heart beats rate (HBR) is restored as well as breathing, then BP and vital capacity of lungs (VCL), later – indicators of main metabolism and bio-chemical indicators of blood and urina (milk acid, CRNN and other) [3, 4, 5]. With it, speed of recreational processes in muscles influence on both on intensity and duration of load, endured by sportsman and on its character. Recreation of muscular tonus and strength after static mode of work (isometric tension) goes slower than after dynamic (isotonic) work of the same duration [1, 2, 3]. In available literature we did not find information about main principles of sportsmen's with myofascial pain syndrome rehabilitation, considering psychological aspect of rehabilitation (http://vmede.org/sait/?id=Le4ebnaya_fizkultura_epifanov_2007&menu=Le4ebnaya_fizkultura_epifanov_2007&page=17; <http://bibliofond.ru/view.aspx?id=9403>; <http://www.booksmed.com/lechebnaya-fizkultura/1009-medicinskaya-reabilitaciya-epifanov.html>) [12-17].

That id why this direction, as a component of complex program of sportsmen's with MFPS rehabilitation is still urgent.

The work has been fulfilled in compliance with “Combined plan of SRW in sphere of physical education and sports for 2006-2010” of Ministry of Ukraine of family, youth and sports, by topic 4.3.2.1, it. “Physical rehabilitation with traumatism in sports with complex coordination” as well as in compliance with “Combined plan of SRW in sphere of physical education and sports for 2011-2015” of Ministry of Ukraine of family, youth and sports, by topic 4.4. “Improvement of organizational and methodic principles of physical rehabilitation's programming with dysfunctions in different systems of human organism”.

Purpose, tasks of the work, material and methods

The purpose of the work is to study the problem and systemize modern scientific-methodic literature, devoted to rehabilitation of sportsmen with MFPS, considering psychological aspect of their rehabilitation.

Material and methods of the research: theoretical analysis and generalization of scientific-methodic literature data, the data of internet and special literature, devoted to this problem.

Results of the research

Modern sport is characterized by quick growth of sportsmanship that results from increasing of scope and intensity of training loads. This, in its turn, sets higher requirements to sportsman's supporting motor system. However, in certain conditions there can appear overloading and over tension that inevitably results in injures and traumas [1, 2, 3].

Determination of rational combination of training and recreational methods at different stages is decisive in solution of rehabilitation problems [7, 8, 9]. Analysis of scientific-methodic literature permitted for us to formulate five main principles of rehabilitation in shortest possible period without any damage for health [1, 3, 5].

1. Principle of urgency is quick and prompt express aid, diagnostic-medical measures, qualified solution of expert questions, concerning prospects for sportsman to continue trainings or competition functioning or urgent hospitalization. Non observance of this principle results in repeated trauma and overloading of earlier damaged tissues that negatively influences on further rehabilitation and in the future can even close sport activity for the sportsman.

2. Principle "stage-by-stage" implies application of rehabilitation means in compliance with phase and stage of disease or trauma. Observation of "stage-by-stage" principle in rehabilitation means that every sportsman shall compulsory pass three stages: stage of medical rehabilitation, stage of sport rehabilitation and stage of sport training. Every of these stages has own purpose and tasks.

Non-observance of this principle, with not complete rehabilitation of nervous-muscle system's rehabilitation, results in repeated traumas.

3. Principle of complex and systemic character implies application of patho-genetically grounded medical-biological and pedagogic means of rehabilitation (medical treatment, psycho-correction, therapeutic physical culture (TPC), physio-therapy). Non-observance of this principle can also serve as a reason of repeated trauma.

4. Principle of individualization and adequacy means selection of rehabilitation means personally for every sportsman, considering the character of trauma, time, passed since injuring, age, sport qualification, sex and personal features of a sportsman.

In selection of rehabilitation means, in order to maintain sportsman's fitness (psycho-correction, TPC (correction by body positions, physical exercises in room, in TPC hall in swimming pool, traction therapy), physio-therapy, manual therapy, reflex therapy, sport eating, special trainings) the determining factor is not so the character of sportsman's functioning as his (her) general condition. That is why volume and intensity of loads in complex rehabilitation shall be differentiated. The higher qualification of sportsman is the earlier special means of training shall be included in rehabilitation measures. Sportsman's motion regime shall be built so that since the first days it could resist reduction of general workability and de-training condition.

5. Principle of dozing is based on necessity to load sportsman in definite scope and intensity. It ensures optimization of functions of motion segment and internal organs as well as dynamic control of their functional rehabilitation [1, 2, 5].

Indicator of rehabilitation's effectiveness is restoration of sportsman's physical and psychological potentials at high level. V.A. Yepifanov underlines that application of recreational means in sport practice is based on observing of a number of general methodic principles, the most important of which are the following [5, 10, 11]:

- effectiveness of recreational means depends on character and scope of training loads;
- repeated application of one and the same means reduces their results;
- complex application of several recreational means increases influence of each of them and their total effect;
- adaptation to means of "local" influence is quicker than to means of general influence.

With composing of individual schema of rehabilitation means' application doctor shall consider a number of very important moments, ignoring of which can result in very serious after-effects for sportsmen:

- after high by scope and intensity load it is purposeful to use, mainly, general means (for example sauna in combination with massage and water procedures, balneologic procedures);

- if, mainly, separate groups of muscles were loaded (for example muscles of upper and lower limbs, torso and so on) then application of "local" influences (segmental-reflexive massage, point massage, vibration massage and etc.) in combination with local physio-therapy would be effective.

It is also necessary to consider that psychological factors significantly influence on many sides of medical-rehabilitation process and, in general, play a key role [4, 5, 7]. This is because they accelerate normal process of psychological re-adaptation to changed, as a result of trauma, life (sport) situation, ensure prophylaxis and treatment of progressing inter-personal changes, which are serious obstacle for sportsman's rehabilitation (see fig.1).

First stage is characterized by psychic changes of, mainly, somatic origin, when sportsman starts feeling anxiety, confusion, motion discomfort, disorders of sleep [15, 16, 17].

At the second stage forming of psychological reaction to trauma completes (2nd-3rd months of disease), which can be adequate and neurotic. As a criterion, distinguishing one type of psychological reaction from other, combination of behavior indicators can serve [18, 19, 20].

Usually, by 4th month since the beginning of traumatic disease reactions to damage of supporting motor system reduce nearly to zero. In dynamic of psychological state the third stage starts, when most of patients become psychologically re-adapt and psychological status of such patients practically does not differ from pre-morbid [21, 22, 23].

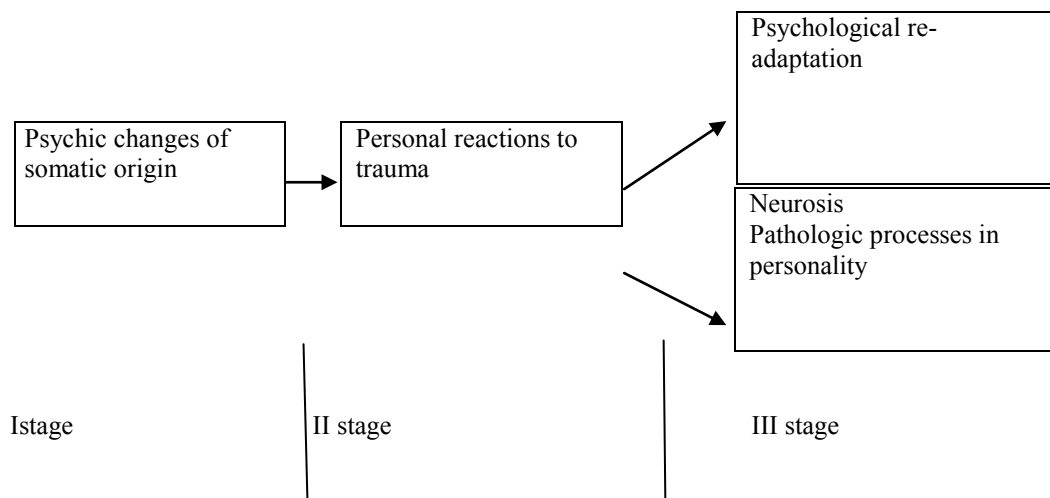


Fig.1. Psychological changes at different stages of traumatic disease (I stage – 1st week, II stage – first 3 weeks, III stage – tardy period of disease) by V.A. Yepifanov, 2007

It is necessary to note that a number of patients endure deepening, fixing and transformation of psychic changes in more steady disorders than on first stage of the disease: neurosis and pathologies of personality (hypochondria, depression). Dynamic of sportsmen' psychological status is influenced by three groups of factors: personal, somatic origin and environmental [7, 16, 20]. Just owing to this fact knowledge of sportsman personality's features permits to large extent to predict character, expressiveness and dynamic of neurotic changes with traumas of supporting motor system [12, 13, 14].

In certain cases it is necessary since the first days to carry psycho-prophylaxis in order to avoid undesirable psychic changes.

The system of stage-by stage psychological rehabilitation permits to prevent from progressing of psychopathologic changes, facilitates achieving of rehabilitation's final target – recreation of personality's and sport status of patient.

Conclusions:

1. Analysis and generalization of modern scientific-methodic literature permitted to determine directions of scientific researches, devoted to rehabilitation, prophylaxis and prevention from traumas of supporting motor system, in particular of sportsmen with MFPS.
2. Restoration of sportsman's physical and psychological potentials at high level is indicators of rehabilitation's effectiveness.
3. In this work we presented strategy of complex physical rehabilitation, considering main principles of rehabilitation of sportsmen with MFPS and psychological aspect of their rehabilitation.

The prospects of further researches are connected with improvement of psychological maintenance of workability rehabilitation program for sportsmen with MFPS, who specialize in arching and with timely implementation of such measures for prophylaxis of repeated traumatism.

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Information about the author:

Kharchenko G.D.: ORCID: 0000-0002-9281-7338; khgd@ukr.net; National University of Physical Education and Sport of Ukraine;; Fizkultury str. 1, Kiev, 03680, Ukraine.

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